

REMARKS

Applicant has amended the claims to renumber original claims 12 and 13 as requested by the Examiner. Claims 1, 2 & 10 were also amended to further clarify the use of both a high-melt and low-melt sewing threads where only the low melt thread melts upon heating. No new matter has been added by this amendment. Based on the arguments presented below Applicant respectfully requests that the Examiner reconsider and withdraw the rejections.

Claims 1-12 were rejected under 35 USC 103(a) based on a combination of three references. Applicant asserts that a *prima facie* case of obviousness has not been established because the combined teaching of these three references does not disclose every claimed feature of Applicant's invention.

Applicant's claimed inventions are directed to either a method of producing a "garment seam" (claims 1-9) or a "bonded seam" contained within a garment (claims 10-12). These seams are characterized by the use of "sewing threads" and specifically the use of "at least one low-melt sewing thread" and "at least one high melt sewing thread." Nothing in any of the three cited references teaches individually or collectively the simultaneous use of both high-melt and low-melt *sewing threads* in a garment seam.

The first reference discussed by the Examiner, Federal Standard 751, makes absolutely no mention of the type of sewing thread that can be used to make the seam depicted. Accordingly, there is absolutely no teaching of the use of either a low-melt or high-melt sewing thread or a combination of both as required by Applicant's invention. Indeed, Applicant wishes to point out that the date of this reference, August 14, 1959, pre-dates widespread commercial availability of synthetic sewing threads, especially those that can melt and form an adhesive bond. Accordingly, this reference can only be construed as referring to sewing threads made of natural materials, such as cotton, wool and the like materials, and not synthetic thermoplastic materials. Of course, the application of heat to sewing threads made of natural materials would not cause melting or adhesion as required by the claims of Applicant's patent application. Moreover, a careful reading of the Federal Standard 751 indicates that the two fabric components are first folded and inter-lapped before top stitching. This is clearly set forth in the text appearing on the first page of the reference and is reproduced below:

This type of seam shall be formed by folding in and interlapping the edges of two plies of material so that the edges of the material are concealed and seaming with one or more rows of stitches.

As such, the Federal Standard 751 reference does not teach or disclose the use of a "set stitch" prior to the final reverse folding to create the seam. Such an initial stitch prior to the final folding of the seam is required by Applicant's claims 2-12.

Combining and relying on the Benstock reference does not cure the deficiencies of Federal Standard 751 because nowhere in Benstock is there any mention or suggestion of the use of *both* a high-melt and low-melt sewing thread. Indeed, Benstock only discloses the use of low-melt *film* and a sewing thread that is capable of "partial melting" (col. 4, line 45). Clearly, a sewing thread that partially melts can not be construed as a being a high-melt thread. As such, there is no disclosure of a high-melt sewing thread as required by the claims of Applicant's invention. Because Applicant's invention requires the use of both high-melt and low-melt sewing threads to form the seam, the high-melt thread is not affected by heat and remains intact after heating the seam thereby preventing "stitch run back." Following the teachings of Benstock would *not* prevent "stitch run back" because the only sewing thread disclosed is one that partially melts and would likely result in a weak and discontinuous stitch that would be very susceptible to "stitch run back."

Applicant also respectfully disagrees with the Examiner's contention that one skilled in the art would have thought it obvious from a reading of Benstock to modify the seam in Federal Standard 751 because there is no teaching in Benstock of the use of a non-melting high-melt sewing thread as required in Applicant's claims. Likewise, there is absolutely no suggestion in either reference to combine a high-melt sewing thread with a low-melt sewing thread so as to "cause the low-melt sewing thread to melt and flow...acting as an adhesive to form a bond...around the high melt sewing thread." (See claims 1(d) and 2(g) of Applicant's application). Without the use of a high-melt sewing thread this claimed step cannot be possible.

Finally, the third reference, Swers, which also was relied on to support the rejection, also does nothing to cure the deficiencies described above. Indeed, nowhere in Swers is the word "thread," "sewing," or "stitch" even mentioned. This is because Swers is directed solely to a "self-coating stabilizing yarn that is to be used with a conventional effect yarn in the construction of outdoor fabrics." (see Swers Abstract). The teaching of Swers is related to the *manufacture*

of fabric and is clearly non-analogous art. One skilled in the art of manufacturing garments *from pieces of fabric* would not look to a patent relating to the manufacture of the actual fabric itself to solve a problem relating to forming strong seams in a garment. This is especially true considering that Swers has absolutely no teaching of forming seams, let alone using a combination of high-melt and low-melt sewing threads to stitch a seam together and then to apply heat to cause the low-melt sewing thread to form an adhesive bond around the high-melt sewing thread to form an adhesive bond around the high-melt sewing thread. Instead, Swers is limited to the manufacture of fabric using *yarns*. These yarns, as described by Swers, are not sewing thread. Moreover, those yarns are a composite of high and low melt filaments. Applicant respectfully disagrees with the Examiner that the Swers Abstract (or anywhere else for that matter) teaches that low-melt threads "strengthens the seam" because the word seam does not appear. In fact, as mentioned, there is absolutely no mention anywhere in Swers of the use of any type of sewing thread. Likewise, there is absolutely *no* teaching regarding the formation of seams.

Accordingly, as mentioned above, Applicant contends that a *prima facie* case of obviousness has not been established because the combination of the three references does not teach the use of both high-melt and low-melt *sewing threads* to form a garment seam. Likewise, none of the references teach or suggest using a combination of a low-melt sewing thread and a high-melt sewing thread, where the low-melt sewing thread acts as an "adhesive to form a bond...around the high melt sewing thread." (claims 1 and 2).

For the reasons stated, Applicant believes the pending claims define patentable inventions and respectfully requests that the rejection be withdrawn and a notice of allowance entered.

Respectfully submitted,

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